

ORIGINAL

OPEN MEETING



0000083079

MEMORANDUM

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410

TO: THE COMMISSION

2008 MAR 25 P 4: 24

FROM: Utilities Division

AZ CORP COMMISSION  
DOCKET CONTROL

DATE: March 25, 2008

RE: UNS ELECTRIC, INC. - APPLICATION FOR APPROVAL OF ITS RENEWABLE ENERGY STANDARD AND TARIFF IMPLEMENTATION PLAN (DOCKET NO. E-04204A-07-0593)

Background

On October 12, 2007, UNS Electric, Inc. ("UNS" or "Company") filed its application for approval of its Renewable Energy Standard and Tariff ("REST") Plan.

UNS includes the following in its application:

Arizona Corporation Commission  
**DOCKETED**

MAR 25 2008

DOCKETED BY

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- A. Proposed Implementation Plans,
- B. Proposed REST Tariff and Proposed Customer Self-Directed Tariff,
- C. Proposed REST Adjustor Mechanism,
- D. Renewable Energy Credit Purchase Program,
- E. Customer Self-Directed Renewable Energy Option Tariff,
- F. Request for release from the Environmental Portfolio Standard and authority to apply EPS funding to REST programs, and
- G. Request for consolidation of reporting requirements.

**A. Proposed Implementation Plans**

UNS includes two proposed Implementation Plans for consideration by the Arizona Corporation Commission ("Commission"). For each, UNS includes the resource technology employed, the cost, and a line item budget.

1. Full Compliance Opportunity Plan

The Full Compliance Opportunity Plan ("Option 1") includes activities and costs that UNS believes are required to meet the renewable and distributed energy ("DE") goals set forth in the REST. The REST renewable energy requirement is 1.75 percent of retail kWh sales in 2008, with 10 percent of that from DE, and half of DE from residential sources.

UNS estimates the cost of Option 1 to be \$4.3 million in 2008. The REST Sample Tariff is estimated to collect \$2.4 million. The additional required revenue would come from increasing the caps in the Sample Tariff for residential and large non-residential customers. This additional revenue results in a total of \$4.5 million for UNS' Option 1.

The Option 1 proposed revenue effects are shown in Table 1.

Table 1 – Option 1 Customer Impact, Year 2008

Customer Class	Total \$	Pct of \$	Avg. Bill	Monthly Cap	Pct of Customers at Cap
Residential	\$2,987,000	66.9%	\$3.20	\$5.20	30%
Small Non-Residential	\$1,209,000	27.1%	\$9.82	\$39.00	11%
Lg. Non-Res ≥3MW	\$208,000	4.7%	\$1,375.00	\$1,500.00	74%
Total	\$4,464,000	100.0%			

## 2. Sample Tariff Plan

The Sample Tariff Plan ("Option 2") proposes activities and costs that UNS believes could be funded with the REST rates and caps remaining at the Sample Tariff level. The major difference between Option 1 and Option 2 is the amount of residential DE.

According to the Company, the REST Sample Tariff revenue is insufficient to allow UNS to be in compliance with the REST requirements to secure 1.75 percent of retail kWh sales in 2008 from renewable resources with 10 percent of that from DE, and half of DE from residential sources. The Sample Tariff Plan targets 34.5 percent of DE from residential sources, rather than 50 percent. Therefore, UNS' Option 2 falls short of meeting the REST residential DE requirements, although the total renewable energy requirement is accomplished.

UNS estimates the cost of Option 2 to be \$2.4 million in 2008. UNS would not change the rates or caps from the Sample Tariff. The REST Sample Tariff is estimated to collect \$2.4 million, including carryover revenue from the existing EPS program. The proposed revenue effects are shown in Table 2.

Table 2 – Option 2 Customer Impact, Year 2008

Customer Class	Total \$	Pct of \$	Avg. Bill	Monthly Cap	Pct of Customers at Cap
Residential	\$892,000	42.1%	\$0.95	\$1.05	84%
Small Non-Residential	\$1,209,000	57.1%	\$9.82	\$39.00	11%
Lg. Non-Res ≥ 3MW	\$18,000	0.8%	\$112.46	\$117.00	91%
Total	\$2,119,000	100.0%			

## 3. Staff Proposed Plan

Staff recommends rejecting UNS' Option 1 as too expensive and burdensome for customers. Staff's opinion is that Option 2 is more reasonable, and if the Commission approves this Plan, Staff recommends requiring UNS to implement this Plan more efficiently, so as to increase the amount of residential DE produced at the Sample Tariff rate.

Staff is providing an alternate Plan, the cost of which falls between the two UNS Plans. Staff proposes a Plan with a cost of \$3.15 million. Staff's Plan uses UNS' Option 2 conditions, with the \$3.00 per Watt photovoltaic incentive, but with greater monthly customer bill caps.

Staff sets the residential distributed energy target at 5 percent of total kWh (50 percent of required DE) and meets REST requirements at a lower cost, as shown on Attachment 1. Staff's plan accomplishes this through substantially lower DE administration and DE integration program costs in addition to the lower rebate per Watt.

The customer impact of Staff's Plan is shown in Table 3

Table 3 – Staff Proposed Plan Customer Impact, Year 2008

Customer Class	Total \$	Pct of \$	Avg. Bill	Monthly Cap	Pct of Customers at Cap
Residential	\$1,557,000	54.7%	\$1.61	\$2.00	73%
Small Non-Residential	\$1,209,000	42.5%	\$9.82	\$39.00	11%
Lg. Non-Res ≥3MW	\$81,000	2.8%	\$475.00	\$500.00	88%
Total	\$2,847,000	100.0%			

## **B. Tariffs**

UNS has proposed REST tariffs modeled after the Sample Tariff contained in the REST Rules. UNS proposes tariffs corresponding to its two proposed Implementation Plans. UNS points out that the approved Implementation Plan and the associated tariff should become effective simultaneously.

1. The REST Tariff for UNS' Option 1 increases the caps from those given in the REST Sample Tariff, and collects approximately \$4.5 million with the plan's cost estimated at \$4.3 million.
2. The REST Tariff for UNS' Option 2 maintains the caps given in the REST Sample Tariff, and collects \$2.4 million, including carryover revenue from the existing EPS program approximately equal to the Plan's cost.
3. The REST Tariff for Staff's Plan would include the same \$0.004988 per kWh rate as in the REST Sample Tariff, with a monthly cap for residential customers of \$2.00 instead of \$1.05, and \$500.00 for large non-residential customers with demands of 3 MW or greater instead of \$117.00.

None of the proposed tariffs recover the full costs of the associated plan. The difference in each case is recovered through EPS carryover revenue and other revenue sources. Table 4 gives a summary of the proposed rates and caps for the three proposals discussed above.

Table 5 shows the cost per month for various customer types based on typical monthly energy use for the three proposals discussed above.

**Table 4**  
**UNS Renewable Energy Programs**  
**EPS and REST - Customer Rates and Caps**

	UNS Proposed Plans			Staff
	Present EPS	Sample Tariff	Full Compliance	Proposed Plan
Per kWh Rate	\$0.000875	\$0.004988	\$0.004988	\$0.004988
Residential Cap	\$0.35	\$1.05	\$5.20	\$2.00
Small Non-Res	\$13.00	\$39.00	\$39.00	\$39.00
Large Non-Res	\$39.00	\$117.00	\$1,500.00	\$500.00

**Table 5**  
**UNS Renewable Energy Programs**  
**EPS and REST - Customer Type Monthly Surcharge Comparison**

Customer Types	Typical kWh / mo.	TEP Proposed Plans			Staff
		EPS	Sample Tariff	Full Compliance	Proposed Plan
Low Consuming Residence	400	\$0.35	\$1.05	\$2.00	\$2.00
Avg. Consuming Residence	960	\$0.35	\$1.05	\$4.79	\$2.00
High Use Residence	2,000	\$0.35	\$1.05	\$5.20	\$2.00
Dentist Office	2,000	\$1.75	\$9.98	\$9.98	\$9.98
Hairstylist	3,900	\$3.41	\$19.45	\$19.45	\$19.45
Department Store	170,000	\$13.00	\$39.00	\$39.00	\$39.00
Mall	1,627,100	\$13.00	\$39.00	\$39.00	\$39.00
Retail Video Store	14,400	\$12.60	\$39.00	\$39.00	\$39.00
Large Hotel	1,067,100	\$13.00	\$39.00	\$39.00	\$39.00
Large Building Supply	346,500	\$13.00	\$39.00	\$39.00	\$39.00
Hotel/Motel	27,960	\$13.00	\$39.00	\$39.00	\$39.00
Fast Food	60,160	\$13.00	\$39.00	\$39.00	\$39.00
Large High Rise Office Bldg	1,476,100	\$13.00	\$39.00	\$39.00	\$39.00
Hospital (< 3 MW)	1,509,600	\$13.00	\$39.00	\$39.00	\$39.00
Supermarket	233,600	\$13.00	\$39.00	\$39.00	\$39.00
Convenience Store	20,160	\$13.00	\$39.00	\$39.00	\$39.00
Hospital (> 3 MW)	2,700,000	\$39.00	\$117.00	\$1,500.00	\$500.00
Copper Mine	72,000,000	\$39.00	\$117.00	\$1,500.00	\$500.00

The Company is required by A.A.C. R14-2-1809.A. to file a tariff under which a customer may apply to UNS for funds to install renewable distributed energy facilities. UNS has developed a Customer Self-Directed Renewable Energy Option Tariff ("REST-TS2") and has included it in the filing made herein. The REST-TS2 applies to either REST Implementation Plan Option. Staff recommends that REST-TS2 be approved.

#### **C. Release from Environmental Portfolio Standard**

According to UNS, the REST is meant to supplant the current Environmental Portfolio Standard ("EPS"), A.A.C. R14-2-1618. UNS also recognizes that there is no specific provision in the REST rules or Decision No. 69217 that releases affected utilities from the EPS obligations or addresses the disposition of EPS surcharge funding. For this reason, UNS requests that it be

formally released from the requirements of the EPS and that it be permitted to apply all unused EPS surcharge funding to REST program expenses.

It is Staff's understanding as well that the REST is meant to supplant the EPS. Accordingly, Staff recommends that UNS be released from the requirements of the EPS and that any remaining EPS funding be applied to the REST program in order to make use of the EPS funding for the purpose of developing renewable generation as it was originally intended. Staff further recommends that the Renewable Energy Standard Rules (A.A.C. R14-2-1801 through -1806) supersede the Environmental Portfolio Standard Rules (A.A.C. R14-2-1618) and any other reporting requirements related to renewable energy resources. Staff further recommends that UNS no longer charge customers the current EPS surcharge and no longer file the annual Environmental Portfolio Surcharge Report ordered by Decision No. 63353.

#### **D. Renewable Energy Credit Purchase Program**

UNS currently has a SunShare program for solar PV of 10 kW or less. This program provides only up-front incentives. UNS proposes a new Renewable Energy Credit Purchase Program ("RECPP") that is different from SunShare in several ways:

1. added other solar technologies,
2. added other renewable technologies,
3. added performance-based incentives, and
4. added larger facilities.

UNS provided Attachment D in its filing, "Conforming Project Incentive Matrix", a table showing incentive payments per kWh as they are reduced over time.

The difference between the program under Option 1 and the program under Option 2 is the rebate amounts for PV and solar water heating. The rebates are higher for PV under Option 1 (\$4.50/watt vs. \$3.00/watt in the years 2008 and 2009). The incentive for solar water heating under Option 1 is \$1,500 plus \$0.50 per kWh up to a maximum of \$3,500. Under Option 2, it is \$750 plus \$0.25 per kWh up to a maximum of \$1,750.

Staff objects to one of UNS' installation guidelines for photovoltaic systems. UNS' requirement states that eligible PV systems must be installed with a horizontal tilt angle between 10 degrees and 60 degrees. A 0 degree tilt is not allowed. This may seem like a small difference, but it is important to recognize that a 0 degree tilt may make the difference between an economically viable system and one that does not "pencil out." The reason is that, even though the 0 degree tilt will provide a less than optimal annual system performance, on a large flat-roof commercial building, the option of installing the system without a rack can make or break the economics of a system.

Staff recommends that the UNS photovoltaic installation requirements allow for a 0 degree horizontal tilt angle option. Further, Staff recommends that UNS be directed to either modify its SunShare PV Off-Angle Shading Annual Energy Derating Chart to allow for a 0

degree tilt or, at UNS' option, merely allow the same rating for 0 degrees as is calculated for a 10 degree horizontal tilt.

In its RECPP, UNS has proposed an exception to the requirements in REST Rule 14-2-1803.B, which defines how energy production will be calculated. Staff realizes that UNS offered its proposed calculation method during the REST Rule approval process, but UNS did not prevail, and the Commission approved the wording in R14-2-1803.B.

Staff believes that it is only fair to all utilities and customers that a uniform set of requirements be used to determine the calculation of Renewable Energy Credits. Staff recommends that the Commission deny UNS' request for an exception to the wording in R14-2-1803.B.

Staff notes that the work of the Uniform Credit Purchase Program ("UCPP") Working Group, which commenced in 2006, should be completed prior to development of reasonable uniform incentives for each renewable generation technology. Staff anticipates that the work of the UCPP Working Group should be completed in 2008. Staff recommends that, if the Commission approves a UCPP, UNS should be required to develop a mechanism to incorporate UCPP procedures and incentive levels for all eligible technologies in its proposed REST Plan for 2009 and later years.

#### **E. Fair Value**

Staff has analyzed UNS' application in terms of whether there are fair value implications. In Decision No. 59951 on January 3, 1997, the Commission determined UNS' fair value rate base to be \$118,495,489. Staff considered this figure for purposes of this analysis. The proposed 2008 Renewable Energy Standard Implementation Plan, Customer Self-Directed Tariff, and REST Tariff would have no impact on the Company's fair value rate base or rate of return because plant developed pursuant to the REST program is not added to the rate base.

#### **F. REST Adjustor Mechanism**

UNS has requested establishment of an adjustor mechanism for recovery of REST program expenses. Establishment of a new adjustor mechanism is best addressed in a general rate case. Therefore, Staff has addressed UNS' proposed adjustor mechanism in the currently ongoing UNS rate case, Docket No. E-04204A-06-0783. While the adjustor mechanism is addressed by Staff in the rate case, the REST rates are properly addressed in this Implementation Plan proceeding.

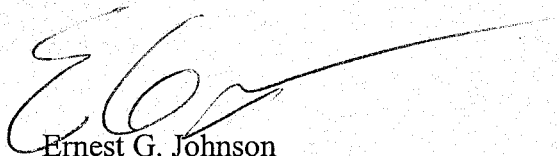
#### **G. Consolidation**

UNS requests that the annual reporting requirements set forth for the GreenWatts Sunshare Program in Decision No. 67178 (August 10, 2004) and as modified in Decision No. 69201 (December 21, 2006) be consolidated with the reporting requirements set forth in A.C.C. R14-2-1812. Staff finds the request to be reasonable.

**H. Staff Recommendations**

1. Staff recommends that UNS' Option 1 be rejected, and that Staff's proposed 2008 Renewable Energy Standard Implementation Plan be approved, as discussed herein. In the event that the Commission does not adopt Staff's proposed REST Plan for UNS, Staff recommends that UNS' Option 2 be approved.
2. Staff recommends that a REST Tariff be approved that includes the rate of \$0.004988 per kWh and monthly caps of \$2.00 for residential customers, \$39.00 for non-residential customers, and \$500.00 for non-residential customers with demands of 3 MW or greater.
3. Staff recommends that UNS' Customer Self-Directed Renewable Energy Option tariff be approved.
4. Staff recommends that UNS make a compliance filing within 15 days of the effective date of the Commission Decision in this case. This filing should include a revised UNS 2008 Renewable Energy Standard Implementation Plan, a REST Tariff, and a Customer Self-Directed Renewable Energy Option tariff consistent with the Decision in this case.
5. Staff recommends that the proposed 2008 Renewable Energy Standard Implementation Plan, Customer Self-Directed Renewable Energy Option tariff, and REST Tariff remain in effect until further order of the Commission.
6. Staff recommends that the Commission approve UNS' Renewable Energy Credit Purchase Program, as modified by Staff, as a replacement for its SunShare program. Staff recommends that, if the Commission approves a Uniform Credit Purchase Program, UNS develop a mechanism to incorporate Uniform Credit Purchase Program procedures and incentive levels for all eligible technologies in its proposed REST Plan for 2009 and later years, including Staff's recommendations shown herein.
7. Staff recommends that the Commission deny UNS' request for an exception to the wording in R14-2-1803.B.
8. Staff recommends that UNS be directed to either modify its SunShare PV Off-Angle Shading Annual Energy Derating Chart to allow for a 0 degree tilt or, at UNS' option, merely allow the same rating for 0 degrees as is calculated for a 10 degree horizontal tilt.
9. Staff recommends that UNS be released from the requirements of the Environmental Portfolio Standard and that any remaining Environmental Portfolio Surcharge funding be applied to the REST program.

10. Staff recommends that the Renewable Energy Standard Rules (A.A.C. R14-2-1801 through -1806) supersede the Environmental Portfolio Standard Rules (A.A.C. R14-2-1618) and any other reporting requirements for UNS related to renewable energy resources.
11. Staff recommends that UNS no longer charge customers the current Environmental Portfolio Standard surcharge and no longer file the annual Environmental Portfolio Surcharge Report ordered by Decision No. 63353.
12. Staff recommends that the reporting requirements for UNS set forth for the GreenWatts Sunshare Program in Decision No. 67178 (August 10, 2004) and as modified in Decision No. 69201 (December 21, 2006) be consolidated with the reporting requirements set forth in A.C.C. R14-2-1812.
13. Staff recommends that the request for establishment of an adjustor mechanism for recovery of REST Program expenses not be approved in this docket.



Ernest G. Johnson  
Director  
Utilities Division

EGJ:RGG:lhmfJFW

ORIGINATOR: Robert G. Gray

	UNS Sample Tariff	Staff Proposal	UNS Full Compliance
	2008	2008	2008
<b>UNSE and REST Program Factors</b>			
RES Annual Renewable Energy Percentage	1.75%	1.75%	1.75%
Energy Sales - MWh Growth @ 2.72%/yr	1,762,733	1,762,733	1,762,733
Expected DSM Program Annual Energy Reductions	3,815	3,815	3,815
Expected DG Program Annual Energy Reductions	0	0	0
Net Retail Energy Sales in MWh per Year	1,758,918	1,758,918	1,758,918
Renewable Energy - MWh	30,781	30,781	30,781
Minimum Distributed Energy %	10.00%	10.00%	10.00%
Minimum Distributed Energy MWh	3,078	3,078	3,078
Minimum Residential Distributed Energy %	3.45%	5.00%	5.00%
Minimum Residential Distributed Energy MWh	1,062	1,539	1,539
Maximum Commercial Distributed Energy %	6.55%	5.00%	5.00%
Maximum Commercial Distributed Energy MWh	2,016	1,539	1,539
Residential Distributed Generation - MWp Total New 60% Solar PV	0.232	0.444	0.444
Residential Distributed Energy - MWp Total New 40% Solar Hot Water/Space Heating & Wind	0.425	0.616	0.616
Commercial Distributed Generation - MWp Total New 25% Solar Electric PV	0.296	0.226	0.226
Commercial Distributed Generation - MWp Total New 75% Non Solar Electric @ ave 50% CF	0.345	0.264	0.264
Distributed Solar Elect MWp Old With Multipliers	0.24	0.24	0.24
Utility Solar Elect MWp Old With Multipliers	0.02	0.02	0.02
Utility Fueled Generation - MWp Old With Multipliers	0.000	0.000	0.000
Utility Generated @ 80% NonDispatchable Energy - MWp New No Multipliers - Wind	11.500	11.500	11.500
Utility Generated @ 20% Fueled - MWp New No Multipliers	0.632	0.632	0.632
<b>Renewable Resource Energy and Power Conversion</b>			
Resulting Total Solar Electric Capacity in MW	0.776	0.918	0.918
Resulting Total Solar Electric Annual Energy in MWh	2,316	2,483	2,483
Incremental Solar Capacity Watts Installed per Year per Person	2.936	3.724	3.724
Resulting Total Distributed Solar Hot Water Heating Capacity in MW	0.929	1.000	1.000
Resulting Total Distributed Solar Water Heating Annual Energy in MWh	929	1,000	1,000
Resulting Total Distributed Non Solar Electric Dispatchable or Displaced Generation Capacity in MW	0.230	0.176	0.176
Resulting Total Distributed Non Solar Electric Dispatchable or Displaced Generation Annual Energy in MWh	1,008	770	770
Resulting Total Wind Electric Generation Capacity in MW	11.500	11.500	11.500
Resulting Total Wind Electric Generation Annual Energy in MWh	22,138	22,138	22,138
Resulting Total Biomass Electric Generation Capacity in MW	0.632	0.632	0.632
Resulting Total Biomass Electric Generation Annual Energy in MWh	5,535	5,535	5,535
Total Renewable Generating Annual Energy in MWh	31,926	31,926	31,926
Total Renewable Generating Capacity in MW	14.068	14.227	14.227
<b>Annual Credit Balances MWh</b>			
Residential Distributed Electric Credit Balance	0	0	1,953
Commercial Distributed Energy Credit Balance	0	0	0
Utility Generated Electric Credit Balance	1,494	1,494	1,494
<b>Assumption</b>			
Residential Distributed Generation Solar Electric %	60.00%	60.00%	60.00%
<b>Residential Solar Electric Up Front Subsidy Payment UCCP Plan</b>			
Residential Distributed Generation Up Front Solar Electric Subsidy Program \$/Watt DC	\$3.00	\$3.00	\$4.50
Additional Residential Distributed Solar Electric Capacity Needed in MWp this given Year	0.232	0.444	0.444
Subtotal Cost of Residential Distributed Solar Electric Subsidies	\$695,929	\$1,332,071	\$1,998,107

<b>Distributed Solar Hot Water &amp; Wind Up Front Subsidy Payment UCPP Plan</b>			
Residential Distributed Solar Hot Water & Wind Up Front Subsidy Program \$/Watt AC Equivalent	\$0.5000	\$0.5000	\$1.0000
Additional Residential Distributed Solar Hot Water & Wind Capacity Needed in MWp this given Year	0.425	0.616	0.616
Subtotal Cost of Residential Distributed Solar Hot Water & Wind Subsidies	\$212,389	\$307,811	\$615,621
<b>Assumption</b>			
Distributed Generation Solar Electric %	25.00%	25.00%	25.00%
<b>Distributed Generation Solar Electric Feed In Tariff Plan</b>			
SubTotal Cost of Distributed Solar Electric Generation Feed In Tariff	\$90,727	\$90,727	\$69,257
Unit Built in 2008	\$90,727	\$90,727	\$69,257
Feed In Tariff Rate for 20 years \$/kWh	\$0.1800	\$0.1800	\$0.1800
<b>Distributed Generation Non Solar Electric Energy Feed In Tariff Plan</b>			
SubTotal Cost of Non Solar Electric Distributed Energy Feed In Tariff	\$75,606	\$75,606	\$57,714
Unit Built in 2008	\$75,606	\$75,606	\$57,714
Feed In Tariff Rate for 20 years \$/kWh	\$0.0500	\$0.0500	\$0.0500
<b>UNSE Generated Renewable Power</b>			
Above Market Premium of Self Generated or Purchased Renewable Power Including Transmission After 2009	\$0.0154	\$0.0154	\$0.0154
Cost of Self Generated or Purchased Renewable Power	\$424,840	\$424,840	\$424,840
<b>Other RES Program Costs</b>			
Grid Integration Rate in \$/MWh	\$0.00	\$0.00	\$0.00
Large Scale Grid Integration Costs in \$	\$0.00	\$0.00	\$0.00
Administrative Costs & Integration Costs & Outreach and Advertising & Net Metering costs	\$883,959	\$915,338	\$1,110,213
<b>DG Program Subtotal</b>			
Distributed Generation & DG Admin and DG Integration Program Costs	\$1,958,611	\$2,721,553	\$3,850,913
<b>Distributed Program % of Total Program</b>			
Percent of Total RES Program Costs	82.18%	86.50%	90.06%
<b>Total Program Expenses</b>			
Total REST Program Cost	\$2,383,451	\$3,146,393	\$4,275,753
<b>Program Revenue Streams</b>			
Credit Sales MWh	0	0	0
Green Sales MWh	6	6	6
Credit Sales \$/MWh	\$0	\$0	\$0
Green Sales \$/MWh	\$85	\$85	\$85
Renewable Product Sales Income	\$508	\$508	\$508
EPS Carryover Revenue	\$260,000	\$260,000	\$0
REST Surcharge/Sample Tariff Income	\$2,118,756	\$2,847,000	\$4,464,137
Investment Tax Credit	\$0	\$0	\$0
Finance Cost @ 10% or Investment @ 5%	\$0	\$0	\$0
<b>Total EPS Program Revenue</b>	<b>\$2,379,264</b>	<b>\$3,107,508</b>	<b>\$4,464,645</b>
<b>Total EPS Program Annual Balance (Subsidy Program)</b>	<b>(\$4,188)</b>	<b>(\$38,886)</b>	<b>\$188,893</b>
<b>Cumulative Gain (Loss) (Subsidy Program)</b>	<b>(\$4,188)</b>	<b>(\$38,886)</b>	<b>\$188,893</b>
<b>Cumulative REST Program Expenditures</b>	<b>\$2,383,451</b>	<b>\$3,146,393</b>	<b>\$4,275,753</b>
<b>Variable Assumptions</b>			
Landfill Gas MWp	5 MWp		
Central Solar Conversion Rate	1700 MWh/MWp		
Distributed Solar Conversion Rate	1350 MWh/MWp		
Distributed Renewable Conversion Rate	1000 MWh/MWp		
Solar Thermal Conversion	2840 MWh/MWp		
Dispatchable Conversion Rate	8760 MWh/MWp		
Wind Conversion Rate	1925 MWh/MWp		

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BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON  
Chairman  
WILLIAM A. MUNDELL  
Commissioner  
JEFF HATCH-MILLER  
Commissioner  
KRISTIN K. MAYES  
Commissioner  
GARY PIERCE  
Commissioner

IN THE MATTER OF THE APPLICATION  
OF UNS ELECTRIC, INC. FOR APPROVAL  
OF ITS RENEWABLE ENERGY  
STANDARD, INCLUDING ITS  
DISTRIBUTED RENEWABLE ENERGY  
PLAN AND RENEWABLE ENERGY  
STANDARD TARIFF

DOCKET NO. E-04204A-07-0593

DECISION NO. \_\_\_\_\_

ORDER

Open Meeting  
April 8 and 9, 2008  
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. UNS Electric, Inc. ("UNS" or "Company") is engaged in providing electric service within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission ("Commission").

Background

2. On October 12, 2007, UNS filed its application for approval of its Renewable Energy Standard and Tariff ("REST") Plan.

3. UNS includes the following in its application:

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Sample Tariff Plan

7. The Sample Tariff Plan ("Option 2") proposes activities and costs that UNS believes could be funded with the REST rates and caps remaining at the Sample Tariff level. The major difference between Option 1 and Option 2 is the amount of residential DE.

8. According to the Company, the REST Sample Tariff revenue is insufficient to allow UNS to be in compliance with the REST requirements to secure 1.75 percent of retail kWh sales in 2008 from renewable resources with 10 percent of that from DE, and half of DE from residential sources. The Option 2 targets 34.5 percent of DE from residential sources, rather than 50 percent. Therefore, UNS' Option 2 falls short of meeting the REST residential DE requirements, although the total renewable energy requirement is accomplished.

9. UNS estimates the cost of Option 2 to be \$2.4 million in 2008. UNS would not change the rates or caps from the Sample Tariff. The REST Sample Tariff is estimated to collect \$2.4 million. The proposed revenue effects are shown in Table 2.

Table 2 – Option 2 Customer Impact, Year 2008

Customer Class	Total \$	Pct of \$	Avg. Bill	Monthly Cap	Pct of Customers at Cap
Residential	\$892,000	42.1%	\$0.95	\$1.05	84%
Non-Residential	\$1,209,000	57.1%	\$9.82	\$39.00	11%
Non-Residential $\geq$ 3 MW	\$18,000	0.8%	\$112.46	\$117.00	91%
Total	\$2,119,000	100.0%			

Staff's Proposed Plan

10. Staff has recommended rejecting UNS' Option 1 as too expensive and burdensome for customers. Staff's opinion is that Option 2 is more reasonable, and if the Commission approves this Plan, Staff has recommended requiring UNS to implement this Plan more efficiently, so as to increase the amount of residential DE produced at the Sample Tariff rate.

11. Staff is providing an alternate plan, the cost of which falls between the two UNS Plans. Staff proposes a plan with a cost of \$3.15 million. Staff's Plan uses UNS' Option 2 conditions, with the \$3.00 per Watt Solar rebate, but with greater monthly customer bill caps.

...

12. Staff sets the residential distributed energy target at 5 percent of total kWh (50 percent of required DE) and meets REST requirements at a lower cost, as shown in Attachment 1. Staff's Plan accomplishes this through substantially lower DE administration and DE integration program costs in addition to the lower rebate per Watt. The customer impact of Staff's Plan is shown in Table 3.

Table 3 – Staff Proposed Plan Customer Impact, Year 2008

Customer Class	Total \$	Pct of \$	Avg. Bill	Monthly Cap	Pct of Customers at Cap
Residential	\$1,557,000	54.7%	\$1.61	\$2.00	73%
Non-Residential	\$1,209,000	42.5%	\$9.82	\$39.00	11%
Non-Residential $\geq$ 3 MW	\$81,000	2.8%	\$475.00	\$500.00	88%
Total	\$2,847,000	100.0%			

#### **B. Tariffs**

13. UNS has proposed REST tariffs modeled after the Sample Tariff contained in the REST Rules. UNS proposes tariffs corresponding to its two proposed Implementation Plans. UNS points out that the approved Implementation Plan and the associated tariff should become effective simultaneously.

14. The REST Tariff for UNS' Option 1 increases the caps from those given in the REST Sample Tariff, and collects approximately \$4.5 million of the Plan's \$4.3 million cost.

15. The REST Tariff for UNS' Option 2 maintains the caps given in the REST Sample Tariff, and collects approximately \$2.4 million, including carryover revenue from the existing EPS program, of the Plan's \$2.4 million cost.

16. The REST Tariff for Staff's Plan would include the same \$0.004988 per kWh rate as in the REST Sample Tariff, with a monthly cap for residential customers of \$2.00 rather than \$1.05, and \$500.00 for large non-residential customers with demands of 3 MW or greater instead of \$117.00.

17. None of the proposed tariffs recover the full costs of the associated plan. The difference in each case is recovered through EPS carryover revenue and other revenue sources. Table 4 gives a summary of the proposed rates and caps for the three proposals discussed above.

18. Table 5 shows the cost per month for various customer types based on typical monthly energy use for the three proposals discussed above.

**Table 4**  
**UNS Renewable Energy Programs**  
**EPS and REST - Customer Rates and Caps**

	<u>UNS Proposed Plans</u>			
	<u>Present EPS</u>	<u>Sample Tariff</u>	<u>Full Compliance</u>	<u>Staff Proposed Plan</u>
Rate per kWh	\$0.000875	\$0.004988\$	\$0.004988\$	\$0.004988
Residential Cap	\$0.35	\$1.05	\$5.20	\$2.00
Non-Residential Cap	\$13.00	\$39.00	\$39.00	\$39.00
Non-Residential $\geq$ 3 MW Cap	\$39.00	\$117.00	\$1,500.00	\$500.00

**Table 5**  
**UNS Renewable Energy Programs**  
**EPS and REST - Customer Type**  
**Monthly Surcharge Comparison**

Customer Types	<u>Typical kWh / mo.</u>	<u>UNS Proposed Plans</u>			<u>Staff Proposed Plan</u>
		<u>EPS</u>	<u>Sample Tariff</u>	<u>Full Compliance</u>	
Low Consuming Residence	400	\$0.35	\$1.05	\$2.00	\$2.00
Avg. Consuming Residence	960	\$0.35	\$1.05	\$4.79	\$2.00
High Use Residence	2,000	\$0.35	\$1.05	\$5.20	\$2.00
Dentist Office	2,000	\$1.75	\$9.98	\$9.98	\$9.98
Hairstylist	3,900	\$3.41	\$19.45	\$19.45	\$19.45
Department Store	170,000	\$13.00	\$39.00	\$39.00	\$39.00
Mall	1,627,100	\$13.00	\$39.00	\$39.00	\$39.00
Retail Video Store	14,400	\$12.60	\$39.00	\$39.00	\$39.00
Large Hotel	1,067,100	\$13.00	\$39.00	\$39.00	\$39.00
Large Building Supply	346,500	\$13.00	\$39.00	\$39.00	\$39.00
Hotel/Motel	27,960	\$13.00	\$39.00	\$39.00	\$39.00
Fast Food	60,160	\$13.00	\$39.00	\$39.00	\$39.00
Large High Rise Office Bldg	1,476,100	\$13.00	\$39.00	\$39.00	\$39.00
Hospital (< 3 MW)	1,509,600	\$13.00	\$39.00	\$39.00	\$39.00
Supermarket	233,600	\$13.00	\$39.00	\$39.00	\$39.00
Convenience Store	20,160	\$13.00	\$39.00	\$39.00	\$39.00
Hospital (> 3 MW)	2,700,000	\$39.00	\$117.00	\$1,500.00	\$500.00
Copper Mine	72,000,000	\$39.00	\$117.00	\$1,500.00	\$500.00

19. The Company is required by A.A.C. R14-2-1809.A to file a tariff under which a customer may apply to UNS for funds to install renewable distributed energy facilities. UNS has developed a Customer Self-Directed Renewable Energy Option Tariff ("REST-TS2") and has

1 included it in the filing made herein. The REST-TS2 applies to either REST Implementation Plan  
2 Option. Staff has recommended that REST-TS2 be approved.

3 **C. Release from Environmental Portfolio Standard**

4 20. According to UNS, the REST is meant to supplant the current Environmental  
5 Portfolio Standard ("EPS"), A.A.C. R14-2-1618. UNS also recognizes that there is no specific  
6 provision in the REST rules or Decision No. 69217 that releases affected utilities from the EPS  
7 obligations or addresses the disposition of EPS surcharge funding. For this reason, UNS requests  
8 that it be formally released from the requirements of the EPS and that it be permitted to apply all  
9 unused EPS surcharge funding to REST program expenses.

10 21. It is Staff's understanding, as well, that the REST is meant to supplant the EPS.  
11 Accordingly, Staff has recommended that UNS be released from the requirements of the EPS and  
12 that any remaining EPS funding be applied to the REST program in order to make use of the EPS  
13 funding for the purpose of developing renewable generation as it was originally intended. Staff  
14 further recommends that the Renewable Energy Standard Rules (A.A.C. R14-2-1801 through -  
15 1806) supersede the Environmental Portfolio Standard Rules (A.A.C. R14-2-1618) and any other  
16 reporting requirements related to renewable energy resources. Staff further recommends that UNS  
17 no longer charge customers the current EPS surcharge and shall no longer file the annual  
18 Environmental Portfolio Surcharge Report ordered by Decision No. 63353.

19 **D. Renewable Energy Credit Purchase Program**

20 22. UNS currently has a SunShare program that provides incentives for solar  
21 photovoltaic facilities ("PV") of 10 kW or less. This program provides only up-front incentives.  
22 UNS proposes a new Renewable Energy Credit Purchase Program ("RECPP") that is different  
23 from SunShare in several ways:

- 24 A. added other solar technologies,  
25 B. added other renewable technologies,  
26 C. added performance-based incentives, and  
27 D. added larger facilities.

28 23. UNS provided Attachment D in its filing, "Conforming Project Incentive Matrix," a  
table showing incentive payments per kWh as they are reduced over time.

1           24.     The difference between the program under Option 1 and the program under Option  
2 2 is the rebate amounts for PV and solar water heating. The rebates are higher for PV under  
3 Option 1 (\$4.50/watt v. \$3.00/watt in years 2008 and 2009). The incentive for solar water heating  
4 under Option 1 is \$1,500 plus \$0.50 per kWh up to a maximum of \$3,500. Under Option 2, it is  
5 \$750 plus \$0.25 per kWh up to a maximum of \$1,750.

6           25.     Staff objects to one UNS' installation guidelines for photovoltaic systems. UNS'  
7 requirement states that eligible PV systems must be installed with a horizontal tilt angle between  
8 10 degrees and 60 degrees. A 0 degree tilt is not allowed. This may seem like a small difference,  
9 but it is important to recognize that a 0 degree tilt may make the difference between an  
10 economically viable system and one that does not "pencil out." The reason is that, even though the  
11 0 degree tilt will provide a less than optimal annual system performance, on a large flat-roof  
12 commercial building, the option of installing the system without a rack can make or break the  
13 economics of a system.

14           26.     Staff has recommended that the UNS photovoltaic installation requirements allow  
15 for a 0 degree horizontal tilt angle option. Further, Staff has recommended that UNS be directed  
16 to either modify its SunShare PV Off-Angle Shading Annual Energy Derating Chart to allow for a  
17 0 degree tilt or, at UNS' option, merely allow the same rating for 0 degrees as is calculated for a 10  
18 degree horizontal tilt.

19           27.     In its RECPP, UNS has proposed an exception to the requirements in REST Rule  
20 14-2-1803.B, which defines how energy production will be calculated. Staff realizes that UNS  
21 offered its proposed calculation method during the REST Rule approval process, but UNS did not  
22 prevail, and the Commission approved the working in R14-2-1803.B.

23           28.     Staff believes that it is only fair to all utilities and customers that a uniform set of  
24 requirements be used to determine the calculation of Renewable Energy Credits. Staff has  
25 recommended that the Commission deny UNS' request for an exception to the wording in R14-2-  
26 1803.B

27           29.     Staff notes that the work of the Uniform Credit Purchase Program ("UCPP")  
28 Working Group, which commenced in 2006, should be completed prior to development of

1 reasonable uniform incentives for each renewable generation technology. Staff anticipates that the  
2 work of the UCPP Working Group should be completed in 2008. Staff has recommended that, if  
3 the Commission approves a UCPP, UNS should be required to develop a mechanism to  
4 incorporate UCPP procedures and incentive levels for all eligible technologies in its proposed  
5 REST Plan for 2009 and later years.

#### 6 **E. Fair Value**

7 30. Staff has analyzed UNS' application in terms of whether there are fair value  
8 implications. In Decision No. 59951, issued on January 3, 1997, the Commission determined  
9 UNS' fair value rate base to be \$118,495,489. Staff considered this figure for purposes of this  
10 analysis. The proposed 2008 Renewable Energy Standard Implementation Plan, Customer Self-  
11 Directed Tariff, and REST Tariff would have no impact on the Company's fair value rate base or  
12 rate of return because plant developed pursuant to the REST program is not added to the rate base.

#### 13 **F. REST Adjustor Mechanism**

14 31. UNS has requested establishment of an adjustor mechanism for recovery of REST  
15 program expenses. Establishment of a new adjustor mechanism is best addressed in a general rate  
16 case. Therefore, Staff has addressed UNS' proposed adjustor mechanism in the currently ongoing  
17 UNS rate case, Docket No. E-04204A-06-0783. While the adjustor mechanism is addressed by  
18 Staff in the rate case, the REST rates are properly addressed in this Implementation Plan  
19 proceeding.

#### 20 **G. Consolidation**

21 32. UNS requests that the reporting requirements set forth for the Green Watts  
22 SunShare Program in Decision No. 67178 (August 10, 2004) and as modified in Decision No.  
23 69201 (December 21, 2006) be consolidated with the reporting requirements set forth in A.C.C.  
24 R14-2-1812. Staff finds this request to be reasonable.

#### 25 **H. Staff Recommendations Summary**

26 33. Staff has recommended that UNS' Option 1 be rejected, and that Staff's proposed  
27 2008 Renewable Energy Standard Implementation Plan be approved, as discussed herein. In the  
28 ...

1 event that the Commission does not adopt Staff's proposed REST Plan for UNS, Staff has  
2 recommended that UNS' Option 2 be approved.

3 34. Staff has recommended that a REST Tariff be approved that includes the rate of  
4 \$0.004988 per kWh and monthly caps of \$2.00 for residential customers, \$39.00 for non-  
5 residential customers, and \$500.00 for non-residential customers with demands of 3 MW or  
6 greater.

7 35. Staff has recommended that UNS' Customer Self-Directed Renewable Energy  
8 Option tariff be approved.

9 36. Staff has recommended that UNS make a compliance filing within 15 days of the  
10 effective date of the Commission Decision in this case. This filing should include a revised UNS  
11 2008 Renewable Energy Standard Implementation Plan, a REST Tariff, and a Customer Self-  
12 Directed Renewable Energy Option tariff consistent with this Decision.

13 37. Staff has recommended that the proposed 2008 Renewable Energy Standard  
14 Implementation Plan, Customer Self-Directed Renewable Energy Option tariff, and REST Tariff  
15 remain in effect until further order of the Commission.

16 38. Staff has recommended that the Commission approve UNS' Renewable Energy  
17 Credit Purchase Program, as modified by Staff, as a replacement for its SunShare program. Staff  
18 has recommended that, if the Commission approves a Uniform Credit Purchase Program, UNS  
19 develop a mechanism to incorporate Uniform Credit Purchase Program procedures and incentive  
20 levels for all eligible technologies in its proposed REST Plan for 2009 and later years, including  
21 Staff's recommendations shown herein.

22 39. Staff has recommended that UNS be released from the requirements of the  
23 Environmental Portfolio Standard and that any remaining Environmental Portfolio Surcharge  
24 funding be applied to the REST program.

25 40. Staff has recommended that the Renewable Energy Standard Rules (A.A.C. R14-2-  
26 1801 through -1806) supersede the Environmental Portfolio Standard Rules (A.A.C. R14-2-1618)  
27 and any other reporting requirements related to renewable energy resources.

28 . . .

42. Staff has recommended that the reporting requirements for UNS set forth for the Green Watts SunShare Program in Decision No. 63362 (February 8, 2001) and as modified in Decision No. 66786 (February 13, 2004) be consolidated with the reporting requirements set forth in A.C.C. R14-2-1812.

44. Staff has recommended that the Commission deny UNS' request for an exception to the wording in R14-2-1803.B.

45. Staff has recommended that UNS be directed to either modify its SunShare PV Off-Angle Shading Annual Energy Derating Chart to allow for a 0 degree tilt or, at UNS' option, merely allow the same rating for 0 degrees as is calculated for a 10 degree horizontal tilt.

1. UNS Electric, Inc. is an Arizona public service corporation within the meaning of Article XV, Section 2, of the Arizona Constitution.

2. The Commission has jurisdiction over UNS and over the subject matter of the application.

3. The Commission, having reviewed the application and Staff's Memorandum dated March 25, 2008, concludes that it is in the public interest to approve the 2008 Renewable Energy Standard Implementation Plan as recommended by Staff.

4. The Commission further concludes that it is in the public interest to approve the Renewable Energy Credit Purchase Program, Customer Self-Directed Renewable Energy Option tariff, REST Tariff, and Staff recommendations in this matter.

IT IS THEREFORE ORDERED that Staff's proposed 2008 Renewable Energy Standard Implementation Plan for UNS Electric, Inc. be and hereby is approved, as discussed herein.

1 IT IS FURTHER ORDERED that the Renewable Energy Credit Purchase Program,  
2 Customer Self-Directed Renewable Energy Option tariff, and REST tariff be approved, as  
3 discussed herein.

4 IT IS FURTHER ORDERED that, if the Commission approves a Uniform Credit Purchase  
5 Program, UNS Electric, Inc shall develop a mechanism to incorporate Uniform Credit Purchase  
6 Program procedures and incentive levels for all eligible technologies in its proposed REST plan for  
7 2009 and later years.

8 IT IS FURTHER ORDERED that the proposed 2008 Renewable Energy Standard  
9 Implementation Plan, Customer Self-Directed Renewable Energy Option tariff, and REST Tariff  
10 remain in effect until further order of the Commission.

11 IT IS FURTHER ORDERED that UNS Electric, Inc.'s Renewable Energy Credit Purchase  
12 Program, as modified by Staff, is approved as a replacement for UNS Electric, Inc.'s SunShare  
13 program.

14 IT IS FURTHER ORDERED that the Commission deny UNS Electric, Inc.'s request for an  
15 exception to the wording in R14-2-1803.B.

16 IT IS FURTHER ORDERED that UNS Electric, Inc. be directed to either modify its  
17 SunShare PV Off-Angle Shading Annual Energy Derating Chart to allow for a 0 degree tilt or, at  
18 UNS Electric, Inc.'s option, merely allow the same rating for 0 degrees as is calculated for a 10  
19 degree horizontal tilt.

20 IT IS FURTHER ORDERED that the annual reporting requirements for UNS Electric, Inc.  
21 set forth for the Green Watts SunShare Program in Decision No. 63362 (February 8, 2001) and as  
22 modified in Decision No. 66786 (February 13, 2004) be consolidated with the reporting  
23 requirements set forth in A.C.C. R14-2-1812.

24 IT IS FURTHER ORDERED that the request for establishment of an adjustor mechanism  
25 for recovery of REST Program expenses not be approved in this docket.

26 IT IS FURTHER ORDERED that UNS Electric, Inc. is released from the requirements of  
27 the Environmental Portfolio Standard and that any remaining Environmental Portfolio Surcharge  
28 funding be applied to the REST program.

1 IT IS FURTHER ORDERED that, for UNS Electric, Inc., the Renewable Energy Standard  
2 Rules (A.A.C. R14-2-1801 through -1806) supersede the Environmental Portfolio Standard Rules  
3 (A.A.C. R14-2-1618) and any other reporting requirements related to renewable energy resources.

4 IT IS FURTHER ORDERED that UNS Electric, Inc. shall no longer charge customers the  
5 current Environmental Portfolio Standard surcharge and shall no longer file the Annual  
6 Environmental Portfolio Surcharge Report ordered by Decision No. 63353.

7 IT IS FURTHER ORDERED that UNS Electric, Inc. shall make a compliance filing within  
8 15 days of the effective date of the Commission Decision in this case. This filing should include a  
9 revised UNS Electric, Inc. 2008 Renewable Energy Standard Implementation Plan, a REST Tariff,  
10 and a Customer Self-Directed Renewable Energy Option tariff consistent with this Decision.

11 IT IS FURTHER ORDERED that this Order shall become effective immediately.

12 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

13  
14 CHAIRMAN

COMMISSIONER

15  
16 COMMISSIONER

COMMISSIONER

COMMISSIONER

17  
18 IN WITNESS WHEREOF, I, BRIAN C. McNEIL, Executive  
19 Director of the Arizona Corporation Commission, have  
20 hereunto, set my hand and caused the official seal of this  
21 Commission to be affixed at the Capitol, in the City of  
22 Phoenix, this \_\_\_\_\_ day of \_\_\_\_\_, 2008.

23  
24 BRIAN C. McNEIL  
Executive Director

25 DISSENT: \_\_\_\_\_

26  
27 DISSENT: \_\_\_\_\_

28 EGJ:RGG:lhmfJFW

1 SERVICE LIST FOR: UNS Electric, Inc.  
2 DOCKET NO. E-04204A-07-0593

3 Mr. Michael W. Patten  
4 Roshka, DeWulf & Patten  
400 East Van Buren Street, Suite 800  
5 Phoenix, Arizona 85004

6 Mr. Marcus Jerden  
7 UNS Electric, Inc.  
One South Church Avenue, Suite 200  
8 Tucson, Arizona 85701

9 Mr. C. Webb Crockett  
Fennemore Craig, PC  
10 3003 North Central Avenue, Suite 2600  
11 Phoenix, Arizona 85012-2913

12 Mr. Ernest G. Johnson  
Director, Utilities Division  
13 Arizona Corporation Commission  
1200 West Washington Street  
14 Phoenix, Arizona 85007

15 Mr. Christopher C. Kempley  
16 Chief Counsel, Legal Division  
Arizona Corporation Commission  
17 1200 West Washington Street  
18 Phoenix, Arizona 85007

19

20

21

22

23

24

25

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